

unpatentable over Kerth in view of the Flowers reference and further in view of the Ong reference. Reconsideration is respectfully requested in view of the foregoing amendments and the following arguments.

The rejection of Claims 1-4 and 9 as anticipated by the Kerth reference

Amended Claims 1, 2, 3, and 9 clarify that the "the second switch" is connected directly between the first terminal (e.g., terminal 50) and the second reference voltage ($+V_{CC}$), and that the "fourth switch" is connected directly between the third terminal (e.g., terminal 52) and the second reference voltage ($+V_{CC}$).

This limitation clearly distinguishes over what is disclosed in the Kerth reference because in the Kerth reference the corresponding screen edge contact terminals are coupled very indirectly to the positive power supply voltage ($+V_s$ in Fig. 6 of Kerth) by means of the current DAC 72, wherein the output current I_s produced by current DAC 72 is controlled by feedback through a complex feedback circuit from the output D_{OUT} of the analog-to-digital converter 78.

Therefore, it is respectfully submitted that amended Claims 1, 2, 3, and 9 are not anticipated by the Kerth reference because it does not disclose the above direct connection limitations of the amended claims.

It also is respectfully submitted that the direct switch connection of the x+ terminal of the x screen to the upper power supply voltage (e.g., $+V_{CC}$) and the direct connection of the y+

terminal to the upper power supply voltage ($+V_{CC}$) would not have been suggested by anything disclosed in the Kerth reference. This is because the Kerth reference discloses a closed-loop system in which the digital output of analog-to-digital converter 78 (Fig. 6 of the Kerth reference) is fed back through a complex feedback circuit to the digital input of a current DAC 72 which is interposed between the resistive screens and the upper power supply voltage $+V_S$. In contrast, the applicants' claims and disclosure are directed to an open-loop system which provides a different kind of self-calibration using a different circuit structure and a different method than the closed-loop system disclosed or suggested by the Kerth reference. That feedback system would not have been needed if the edge terminals of the two resistive screens would have been directly connected to $+V_S$ by the screen selection switches.

Perhaps this point can be made more clear by referring to the applicants' Fig. 1, wherein it can be seen that the voltage of the x+ terminal 50 clearly tracks precisely with variations in $+V_{CC}$ as a result of the direct connection referred to. Similarly, the voltage of the y+ terminal 52 also tracks precisely with variations in $+V_{CC}$. Therefore, the voltage is between the +REF and -REF terminals of the ADC 22 also tracks precisely with the variations in $+V_{CC}$. This avoids the need to use the current DAC 72 of the Kerth reference and the complex feedback circuitry coupled between the digital output of the analog-to-digital converter of the Kerth reference including the SAR logic 94, the master control 81, gates 85, 86, 95, 96, registers 91 and 82, and multiplexer 97 to self-calibrate the DAC with respect to variations in $+V_{CC}$.

Note that the operation disclosed in the Kerth reference requires the current I_S produced by current DAC 72 to be adjusted until the full-scale output value of D_{OUT} (in response to a full-

scale analog input from one of the screens) attains the proper value of all "1"s. This is in sharp contrast to the disclosed and claimed invention wherein the claimed direct connection of the resistive screen to $+V_{CC}$ automatically provides tracking of the signal input range of ADC 22 relative to $+V_{CC}$ so that a full-scale output value of D_{OUT} can attain the proper value of all "1"s without the need to use the closed-loop feedback system of Kerth for on-chip self-calibration.

The Claim Rejections Under §103

It is respectfully submitted that the Flowers reference does not disclose a touch screen system including two resistive screens, one for measuring a first coordinate of a touched point and another for measuring a second coordinate of the same touched point, wherein the location of the touched point is determined by contact between the two screens resulting from the touching. In contrast, in the Flowers reference at least three drive signals are applied to at least three points of a single resistive layer to produce voltages which vary across the surface of the resistive layer and can represent two coordinates of each point on the surface. In the Flowers reference, the switches operated by the processor function to select which combinations of the three or more contact points of the single resistive layer are energized at any particular time, and do not operate to select which of the two resistive layers is being energized, as is the case for applicants' disclosed and claimed invention.

It is respectfully submitted that there is no reason why the combination of the teachings of the Kerth reference with the teachings of the substantially different Flowers and/or Ong references, neither of which shows the direct connection of switches between an edge contact of

a resistive screen and a $+V_{CC}$ power supply or the like, would have suggested to one of ordinary skill in the art any advantage of providing the claimed direct connections of screen-selecting switches between screen edge contact points and the higher power supply voltage ($+V_{CC}$).

New Claim 10 is directed to the user-provided initial software calibration procedure described on page 15, line et seq. of the specification. It is respectfully submitted that nothing disclosed in the Kerth reference or any of the other references provides any suggestion that would have made it obvious to one of ordinary skill in the art to provide the further limitations of new Claim 10, in combination with the limitations of its parent Claim 2.

In view of the above arguments and amendments, it is respectfully submitted that the invention as claimed would not have been obvious to one of ordinary skill in the art in view of the primary said reference by Kerth et al. in view of either or both of the Flowers and Ong references. Therefore, it is respectfully submitted that the application is in condition for allowance.

Respectfully submitted,

CAHILL, SUTTON & THOMAS P.L.C.

A handwritten signature in black ink, appearing to read "Charles R. Hoffman", with a long horizontal flourish extending to the right.

Charles R. Hoffman
Registration No. 26,556

2141 East Highland Avenue
155 Park One
Phoenix, Arizona 85016
(602) 956-7000
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